

3174-01

What is claimed is:

1. **(Currently Amended)** A composition comprising:

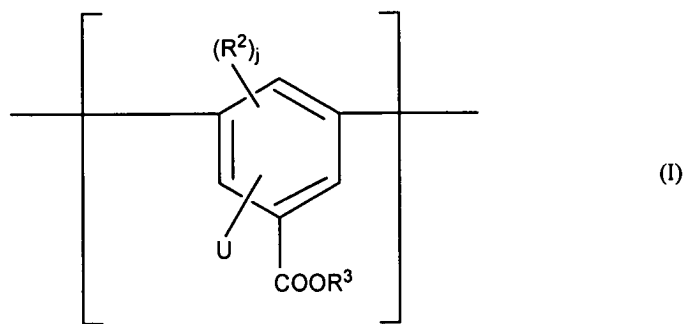
(a) a sulphur free reaction product of:

(i) a hydrocarbyl substituted aromatic compound containing an acidic group selected from the group consisting of a carboxylic group, a hydroxyl group and mixtures thereof; and

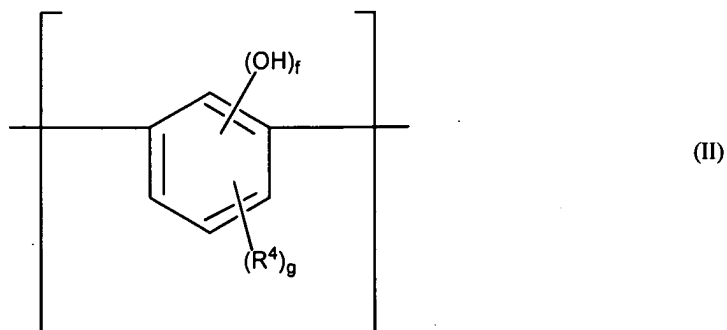
(ii) an organic nitrogen-containing base reacted with the acidic group, wherein the organic nitrogen-containing base is at least one member selected from the group consisting of (1) an amino-containing imine or a reactive equivalent thereof; (2) ammonia or a reactive equivalent thereof; (3) a monoamine; (4) a polyamine; (5) a nitrogen containing heterocycle; (6) an aminoalcohol; (7) a tetraalkylammonium salt; and (8) a non-heterocyclic aromatic amine; and

(b) an oil of lubricating viscosity,

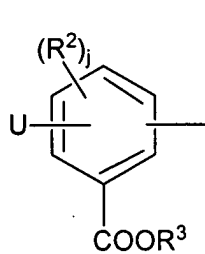
wherein (a)(i) is a substantially linear compound comprising at least one unit of the formula (I)



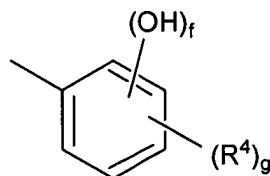
or the formula (ii)



wherein each end of the compound is terminated by a unit of the formula (III) or the formula (IV)



(III)



(IV)

and wherein the units of the compound are linked by divalent bridging groups which may be the same or different for each linkage; U is a hydroxyl group for (a)(i)(1) or is selected from the group consisting of  $-\text{NH}_2$ ,  $-\text{NHR}^1$ ,  $-\text{N}(\text{R}^1)_2$  and mixtures thereof for (a)(i)(2) wherein  $\text{R}^1$  is a hydrocarbyl group containing 1 to 5 carbon atoms;  $\text{R}^2$  is a hydroxyl or a hydrocarbyl group and j is 0, 1 or 2;  $\text{R}^3$  is hydrogen or a hydrocarbyl group; f is 1, 2 or 3;  $\text{R}^4$  is a hydrocarbyl group or a substituted hydrocarbyl group and g is 1, 2 or 3 provided that at least one  $\text{R}^4$  group contains 8 or more carbon atoms; and wherein the compound on average contains at least one unit of formula (I) or (III) and at least one unit of formula (II) or (IV) and the ratio of the total number of units (I) and (III) to the total number of units of (II) and (IV) in the compound is about 0.1:1 to about 2:1.2.

2. **(Original)** The composition of claim 1 further comprising at least one other performance additive selected from the group consisting of dispersants, antioxidants, foam inhibitors, demulsifiers, friction modifiers, and viscosity modifiers.
3. **(Original)** The composition of claim 1, wherein component (a) is present at about 0.01 wt % to about 40 wt %; the oil of lubricating viscosity is present at up to about 99.99 wt %; and wherein other performance additives are present at 0 wt % to about 30 wt % of the composition.
4. **(Original)** The composition of claim 1, wherein the total sulphur content of the composition is below about 0.5 weight percent; wherein the total phosphorus content of the composition is below about 0.07 weight percent; and wherein the total sulphated ash content of the composition is below about 1.5 weight percent.
5. **(Original)** The composition of claim 4, wherein the total sulphur content is below about 0.1 weight percent; wherein the total phosphorus content is about 100 ppm or less; and wherein the total sulphated ash content is below about 0.08 weight percent.

Claims 6-20 (**Cancelled**)

21. **(Currently Amended)** A composition comprising:
  - (a) a sulphur free reaction product of:
    - (i) a hydrocarbyl substituted aromatic compound containing an acidic group selected from the group consisting of a carboxylic group, a hydroxyl group and mixtures thereof;
    - (ii) ammonia or an organic nitrogen-containing base reacted with the acidic group, wherein the organic nitrogen-containing base is at least one member selected from the group consisting of (1) an amino-containing imine or a reactive equivalent thereof; (2) ammonia or a reactive equivalent thereof; (3) a monoamine; (4) a polyamine; (5) a nitrogen containing heterocycle; (6) an aminoalcohol; (7) a tetraalkylammonium salt; and (8) a non-heterocyclic aromatic amine; and
    - (iii) a metal-containing base; and

- (b) an oil of lubricating viscosity.

Claim 22 (*Cancelled*)

23. (*Previously Presented*) The composition of claim 1, wherein the reaction product of component (a) is a reaction product of components (a)(i), (a)(ii) and (a)(iii) a metal-containing base.

24. (*Cancelled*)

25. (*Currently Amended*) The composition of ~~claim 24~~ claim 1, wherein (a)(ii)(1) is at least one member selected from the group consisting of guanidine, aminoguanidine, 1,3-diaminoguanidine, acetamidine, formamidine, benzamidine, 3- and 4-aminobenzamidine, and reactive equivalents thereof.

26. (*Currently Amended*) The composition of ~~claim 24~~ claim 1, wherein (a)(ii)(3) is a hydrocarbyl substituted primary, secondary or tertiary monoamine or mixture thereof.

27. (*Currently Amended*) The composition of ~~claim 24~~ claim 1, wherein (a)(ii)(4) is an alkylenediamine, a polyethylenepolyamine, or a mixture thereof.

28. (*Currently Amended*) The composition of ~~claim 24~~ claim 1, wherein (a)(ii)(5) is a pyrrole, a pyrrolidine, an imidazole, an imidazoline, a piperazine, a pyrazole, an oxazole, a pyridine, a piperidine, a pyrimidine, a purine, a benzotriazole, a 1,2,4-triazole, a quinoline, an isoquinoline, a carbazole or mixtures thereof.

29. (*Currently Amended*) The composition of ~~claim 24~~ claim 1, wherein (a)(ii)(6) is an aminoalcohol containing 1 to 6 hydroxyl groups, 1 to 8 amino groups, and 2 to 50 carbon atoms.

30. ***(Previously Presented)*** The composition of claim 29, wherein the aminoalcohol is a monoalkanolamine, a dialkanolamine, a trialkanolamine or mixtures thereof.

31. ***(Previously Presented)*** The composition of claim 1 wherein component (a) is free of metal.

32. ***(Previously Presented)*** A process for the preparation of the composition of claim 1, comprising:

- (a) heating reactants (a)(i) and (a)(ii);
- (b) optionally holding the product of step (a) under vacuum; and
- (c) adding the product of step (a) or (b) to an oil of lubricating viscosity.

33. ***(Previously Presented)*** A product prepared by the process of claim 32.

34. ***(Previously Presented)*** A method for lubricating an internal combustion engine, comprising supplying to the engine the composition claim 1.

35. ***(Cancelled)***

36. ***(Previously Presented)*** A composition comprising:

(a) a sulphur free reaction product of:

(i) a hydrocarbyl substituted aromatic compound containing a carboxyl and/or hydroxyl acidic group and selected from the group consisting of (1) an oligomeric reaction product of a hydrocarbyl-substituted phenol, an aldehyde, and a carboxyl-substituted phenol; (2) an oligomeric reaction product of a hydrocarbyl-substituted phenol, an aldehyde, and a carboxyl-substituted phenylamine; and mixtures thereof; and

(ii) an organic nitrogen-containing base reacted with the acidic group of (a)(i), wherein the organic nitrogen-containing base is at least one member selected from the group consisting of (1) an amino-containing imine or a reactive equivalent thereof; (2) ammonia or a reactive equivalent thereof; (3) a monoamine; (4) a

polyamine; (5) a nitrogen containing heterocycle; (6) an aminoalcohol; (7) a tetraalkylammonium salt; and (8) a non-heterocyclic aromatic amine.

37. ***(Previously Presented)*** The composition of claim 1, wherein the sulphur free reaction product is neutralized.